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Conference Abstract

Plinian Core: The long and winding road

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Abstract

Plinian Core (PliC) is a set of vocabulary terms that can be used to describe different aspects of biological species information. Under "biological species information" all kinds of properties or traits related to taxa—biological and non-biological—are included. Thus, for instance, terms pertaining to descriptions, legal aspects, conservation, management, demographics, nomenclature, or related resources are incorporated.

Plinian Core started as a collaborative project between Instituto Nacional de Biodiversidad (INBio, Costa Rica) and the Global Biodiversity Information Facility Spain (GBIF Spain) in 2005. In successive years, the National Commission for Knowledge and Use of Biodiversity (CONABIO, Mexico), the National Network of Open Biodiversity Data (SiB Colombia)/the Humboldt Institute (Colombia), the University of Granada (Spain) and the University of São Paulo (USP, Brazil) were also involved. In 2012. PliC aligned with the Biodiversity Information Standards (TDWG) and an umbrella Interest Group was created (Species Information IG, Pando 2017b) with developments carried out by its corresponding TDWG Task Group (Plinian Core Task Group 2020b).

PliC design requirements include: ease of use, being self-contained, able to support data integration from multiple databases, and ability to handle different levels of granularity.

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Since its early stages, PliC was formalized as an XML Schema. Its terms can be grouped in its current version as follows:

- Metadata
- Base elements
- Record metadata
- Nomenclature and classification
- Taxonomic description
- Natural history
- Invasive species
- Habitat and distribution
- Demography and threats
- Uses, management and conservation
- Miscellaneous: associated party, measurement or fact, references and ancillary data

During its years of existence, PliC has been implemented in several real-life contexts (e.g., Spanish Ministry for the Ecological Transition and the Demographic Challenge 2020, CRBIO 2020, SIB Colombia 2020), and a set of extensions for using PliC in GBIF Integrated Publishing Toolkit (IPT) was developed (Plinian Core Task Group 2020a).

PliC has been featured in some TDWG conferences, either to explore and explain how it relates to other TDWG standards (Pando 2018), how PliC handles specific information aspects (Pando 2017a), or how it may be used in biodiversity portals (Vargas et al. 2018, Vargas et al. 2019).

Recent work has focused on how to represent terms and codify structure as an XML Schema (XSD) under the current TDWG Documentation Standard (SDS, Vocabulary Maintenance Specification Task Group 2017). Challenges identified in the process comprise: how to handle terms used in different contexts, how to preserve the semantic context of terms reflected in the XSD hierarchy in the SDS flat layout, and how to refer to terms and definitions defined in other data specifications. These are the areas to focus our contribution.

Keywords

controlled vocabularies, data specification, species information, standards

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Conflicts of interest

All authors declare that they have no conflicts of interest.

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